Importance of Humus.

Humus is decayed vegetable or animal matter. Leaf mold is practically pure humus. When cowpeas are turned under when plants rot away, when manure is applied to the soil, humus is producted. Some one has said that "humus" is the most important world in the English language for the Southern Farmer. Why is that so? Let us see what humus means to the soil.

1. Humus is itself a plant food, becanse it consists in part of nitrogen, phosphorus and potash,

2. Humus improves the texture of any soil, making it easier to till.

3. Humus fills np the pores in clay soils euabling them to hold more moisture; it makes clay soils compact, increasing their power to absorb water.

4. Hnmus being dark, makes the average soil darker, and therefore warmer.

5. Humus produces, by its decomposition, humic and other acids, which help to liberate the plant food that is held in its insuluble form in the soil,

6. Humus affords a good home for the many germs or microbes that inhabit the soil and improve it.

So important to Southern soils is decompored organic matter (humus) that every farmer should turn under all vegetation on his farm which is not used as fuel, and when it is fed should be returned to the soil in the form of manure.

Revenue Agents.

The legislature ought to repeal the roving commissions to state revenue agents. Every county should have its own revenue agents with authority to uncover hidden wealth only in his own county. He would thus have a responsibility to his bome people and any persecution upon his part would be properly resented. as would be flagrant neglect of duty. Why should not these duties devolve upon the county attorney, who in addition to his other fees could afford to undertake this work for a smaller commission than is at present paid revenue agents? There is undoubtedly much resentment in the state over the methods of the present revenue agents, but the system of digging for concealed wealth for taxation can not be abandoned.

Shoots Father.

Flint, Mich., Nov. 20—With a loaded shotgun in his hands and uttering threats to kill the whole family, Frank Young, fifty years old, was shot down and instantly killed by his daughter, Mrs. Marion Mills, at the latter's home near here Sunday.

According to the story told by Mrs. Mills and her husband, Francis M. Mills, Young came to their home in search of his wife, whom he had driven from his own home last Friday.

When Young reached the door he asked for his wife. who was then hiding in the cellar. Mrs. Young refuses to return home with her husband or to speak to him alone.

Immedately after his wife's refusal, according to the Mills' statements, Young drew his gun to his hip with a threat to "kill the whole tribe."

Mills grappled with his father-in-law but was being overpowered when Mrs. Mills seized another gun and fired. Young was shot through the lungs, dying instantly.

Both Mrs. Mills and her husband are under arrest.

To Clean Hair Ribbons.

Wide ribbons that are worn by school girls cost quite a sum in the year and mothers may be glad to know how to wash them without spoiling. Put three tablepoonfuls of honey and three ounces of soft soap into a cup of half gin, half water, spread the ribbons on a board and with a nailbrush scrub them with the mixture; do not rub or squeeze them, but rinse by dipping up and down in clear wster several times; then hang them over a line to drip and iron between clean cloth by holding an iron perfectly still and drawing the ribbons from under it; this prevents the usual steingy, shiny appearance from ironing the us. ual way. For white ribbons use warm water and a white soap; rinse in three clear waters, tepid and a little bluing in the last; hang in the sun until partly dried and press between clean muslin with a warm, not hot iron.

Flowerd ribbons will not fade if washed quickly and not allowed to hang long enough to run the colors into each other. But flowerd ribbons are rarely liked by school girls; only the plain colors.

Lincoln Center, Kansas, has begun the trial of the men accused of applying a coat of tar and feathers to a young woman. That town has grown so ashamed of the misdeed commited by two-legged animals who call themselves men that a request has been made that the newspapers suppress accounts of the trial, on the ground that the publicity will injure the town. The town which harbors men who would stoop to so cowardly an attack on a girl deserves no consideration from anybody.—Ex.

Judging by the number of applications that have been made for private secretary to the Governor, that place must be regarded as most desirable. It is said that scores of applications have been made to Gov.-elect McCreary, the number totaling something like eighty. It is understood the appointment will go to a man from the First Congressional district. Robert Phillips is also mentioned for this place, and it is said that he has his choice between private secretary to the Governor and State Inspector and Examiner.

Gov. Willson has granted a pardon to Louis Futrell, convicted in Mc Cracken county of manslaughter and sentenced to the penitentiary for two years. He has served more than year and would have only a few months longer to serve. Futrell killed a man who was engaged in a fight with Futrell's father. Cov. Willson says that the puuishment already imposed is enough considering the circumstances of the killing and the fact that boy shot to save his father.

TROLLEY AS FARM AID.

Michigan Electric Lines Aided In Disposing of Fruit.

The advantage of handling big crops of fruit by the trolley lines was illustrated in the lower peninsula of Michigan in 1911 to an extent never before realized. Had it not been for the electric lines of two of the states handling this class of traffic the disposal of the apple, peach, pear and other crops would have met with loss.

Only a couple of years ago there was but one line of electric railway hauling fruit out of Berrien county orchards to the steamship docks at Benton Harbor. Now there are about half a dozen. Some of the lines rush trains of fruit from points west of Elkhart, Ind., to the steamboat docks at Benton Harbor. These points are over 100 miles from Chicago, the greatest market of the entire region. Consignments of fruit leave the orchards late in the afternoon and are loaded into express cars and flat cars with crated ends and sides. Trains are run on fast time and stop only to pick up fruit, and from certain points they do not stop for any purpose. At Benton Harbor the fruit packages are loaded on great side wheel steamers and carried through the cooling atmosphere of Lake Michigan, reaching Chicago about 4 a. m. From the Chicago docks the big supply intended for consumption in a city of over 2,000,000 people is distributed early in the forenoon.

But Chicago does not begin to take all of the fruit produced by the great orchards of two states. Millions of packages are shipped off over most of the twenty-five different railroads radiating from the city. They are hauled from the docks to the depots and there are given to the express companies operating on the railroads. It is at this point that the advantage of shipping across the lake comes in. Had most of these shipments been sent by rail the cars could not have been given to the belt line in time to connect with the outgoing trains in the morning, and thus serious damage to fast ripening fruit might have been done. The steamboat company could not have got the products of distant orchards had it not been for the rapid electric lines, so that it is only by a combination of the work of three different means of transportation that it has been possible to market phenomenally big crops of fruit. The rate of the entire electric and lake haul is not more than the cost of one direct shipment by rail to the same point, and in some instances it is less.

Another advantage of shipping fruit by electric lines is that refrigeration is unnecessary.—Country Gentleman.

Good Rivets From Old Materials.

Every farmer has a lot of old horse nails in the old horseshoes. Take a piece of a broken tooth from a spring tooth harrow, heat it and punch a hole through it just large enough to admit the horse nail. When this becomes cold you can insert a nail and beat it down to a very nice head and do it cold too. If you want a nice rounded head on the rivet the head of the nail can be rounded up a little before it is hammered down. Take scraps of the modern steel roofing, cut them in small squares and with the handle end of an old file you can punch a a hole that just suits the nail rivet. In this way you can always have rivets of almost any length. These rivets are far stronger and more serviceable than copper ones.—Farm and Fireside.

LOOK TO THE FUTURE.

Provide for humus in the soil by planting green crops to be turned under to improve the fertility of the soil for future crops. This is one of the reasons that should appeal to you for rotation of crops.

Orchard and Garden.

Every time you set your feet on a weak, rickety ladder you risk life and limb. If wouldn't take half so long to mend a broken round on the ladder as it would to mend a broken bone.

A well known floriculturist says that the gladiolus and dahlia can be handled exactly like the potato. They will keep anywhere. Tuberoses and cannas are more like sweet potatoes in their requirements and must be kept warm.

Breaking the shell of a hard winter squash with a hatchet is rather a dangerous process. If a handy little meat saw forms part of the kitchen outfit it will be found very convenient for this purpose. It is easier and safer to saw the hard shell than to chop it.

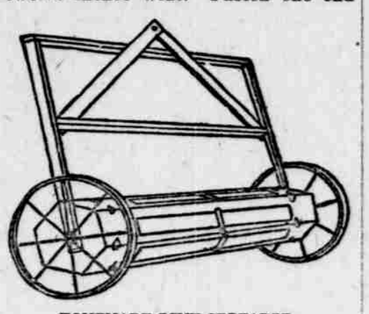
The manufacture of grape juice as a business is growing very rapidly. It supplies a good outlet for ripe sweet grapes whenever the fruit market is unsatisfactory. One grape producer made 450 gallons of grape juice from the product of less than one acre of land. This grape juice put up in pint bottles and sold at retail at 25 cents each would amount to $1,800, a big value to be obtained from land that was producing hardly anything as a part of the farm.

Farm and Garden

FOR SPREADING LIME.

Contrivance That Can Be Made at Home Easily and Cheaply.

The accompanying cut shows a homemade machine for distributing lime, ashes, etc. The six cornered box is hung on a 4 by 4 scantling hewn down so it will run through wheels about four inches as bearings for the frame to draw by. A tongue is not needed, although one could be used. Any old wagon or mowing machine wheels will do. Make the ends to fit axle, both ends alike, doubled crosswise of the grain of the wood with one inch boards twelve inches wide. Fasten one end



HOMEMADE LIME SPREADER.

of the box and axle to a wheel and let the other wheel turn on the axle. A support may be put in the center the same as the end, but it is not necessary unless the box is made longer than ten feet, as it is very strong and the axle breaks the fall of the contents and prevents packing. The feed is regulated by using two three-inch strips on each side with three cross strips, with one bolt in the center and a heavy screw through the ends into the long strips. Leave the center cross strip long enough for the handle to close. While filling tack the strips to hold exact while boring one and one-fourth inch holes ten inches apart opposite the side holes intermediate. Use three strap hinges and three hasps with hooks on one side for door. Any amount can be put on. By using a button to stop lever one can adjust amount wanted. Turn the button to stop the lever the same every time. The bill for material would be one piece 4 by 4 inches twelve feet long, seven pieces 1 by 12 inches ten feet long, three pieces 2 by 4 inches ten feet long, one piece 1 by 4 inches ten feet long, fifteen pieces 1 by 3 inches ten feet long, eighteen ½ by 3 inch bolts, forty-two No. 8 1¾ inch screws, three six inch strap hinges and seven-eighths inch screws, three six inch book hasps, six staples, two old wheels. It will do the work. Any handy person can make one in two days. The cost of material ought not to exceed $5 anywhere, new and dressed.—Iowa Homestead.

NEIGHBORHOOD ANNOUNCER.

Also Useful to Tell Passersby What Owner Wants to Sell or Buy.

H. O. Barnhill, a Montana ranchman, was the first farmer in his locality to use a blackboard, and he found it a great advantage on his ranch. The idea was such a good one that it was adopted by a number of ranchers in that country. The name of the farm and owner thereof are printed on the board in plain view, and notices to buy, sell, rent or hire may be written on it. The blackboard may also be used to announce neighborhood meetings, and by placing the board on the public road nearest the farm it will be of great convenience to neighbors and advantage to the owner of the place.

The board should be coated with the preparation used on school blackboards, as ordinary black paint does not take chalk well. The board costs about $2.25 complete.—Orange Judd Farmer.

Apiary Notes.

Never disturb the bees in cold weather.

Bees winter better if they are given part honey and part sugar to live on.

There are beekeepers all over the United States who, with a favorable locality and good management are making an excellent living.

Beekeepers frequently find it necessary to feed a few colonies during the cold months in order to save them from starvation. As a rule, the beekeeper who extracts honey too late in the summer finds it necessary to supplement food during freezing weather to ward off heavy loss.

Extracted honey, if brought to a temperature of not over 160 degrees F., bottled and sealed while hot, will usually, if kept in uniformly warm temperature, keep liquid for a year or more. But there is a great difference in honey. Some will candy much more quickly than others. Cold atmosphere is quite favorable to candying of both extracted and comb honey. Cellars and cold rooms are poor places for honey.

Whenever it seems desirable to change crops or methods of farm management, adjust yourself to the change quickly and make the most of it. It is folly to cling tenaciously to a system that does not meet the needs of present day agriculture.

A NEEDED CONSERVATION.

One hears much these days about conservation, particularly that which has to do with the husbanding and protecting of forms of material wealth, such as ores, coal, soil and water power. This is a praiseworthy movement, but there is another type of conservation that is of even more vital concern than that involving the relations that exist in the myriad homes of the land. There is little question that along this one line there are a dissipation of vital energy and a destruction of the best wealth of American homes—their peace and happiness—that are of greater moment than the waste in any material realm can possibly be. This waste takes place in the pulling and hauling, faultfinding, bitterness and dissension that curse and blast so many homes, weaken and impoverish so many lives, and in instances not a few actually induce fatal illness and result in both murder and suicide. The average person would call another a fool who, instead of oiling a machine which he wished to operate, put acid and sharp grit on all the bearings, yet in thousands of homes everywhere this same thing is done continually—the wearing parts of the home deluged daily with the acid of bitterness and dissension and the grit of selfishness and all around meanness when these same bearings should be kept clean and bright with cheerfulness and lubricated with kindness and real affection. The members of all too many homes seem to have missed the great fact that it is just as easy and a whole lot more profitable to be happy than miserable and that making the former condition a reality is the noblest kind of conservation.

TREE SURGERY.

There are one or two points connected with removing large limbs from shade trees that the novice at the job would do well to remember. The first is that the limb should be sawed one-third through from the underside and a foot or two from the tree. Next a cut should be made with the saw on the upper side of the limb and a foot or so farther from the trunk than the cut on the underside. This should be continued until the weight of the limb causes it to fall. Instead of ripping a strip of bark off clear down to the tree, as is so often the case when the cut on the underside of the limb is not made, this will be prevented by the undercut mentioned. A stub will be left at this stage, and the final cut should then be made, sawing this off as close to the trunk as possible without disturbing the bark and on a line parallel with the direction of the trunk. The aim should be to leave the cut in such shape that it will heal over in the shortest possible time. To prevent decay setting in to the trunk from the cut the latter should be given two or three coats of white lead paint or smeared over with a thin coating of grafting wax.

WHAT ONE CITY MAN DID.

Chicago papers of a recent date tell of the success of a city man, with a "back to the land" hankering, in raising sugar beets during the past season. He held a city position, but thought he would give agriculture a trial. Accordingly he rented a forty acre farm some thirty miles out and made his home there, going in to his work. He saw to the proper preparation of the ground and had the entire area sowed to sugar beets. He did no manual labor, but only planned and superintended the work. He has recently sold the beet crop for $3,600. His expenses were $2,000, leaving him $1,600 net for his trouble. Not every man could do this, it will be admitted, for there was necessary, first, the ability to appreciate the opportunity and, secondly, determination and energy to carry the plan into execution. But notwithstanding this the incident shows that opportunities for getting ahead are a long way from exhausted.

A POTATO EXPERIMENT.

An experiment in growing potatoes which was made by a gardener not far from where the writer lives may interest some of our readers. Last spring at planting time he dug a trench seven or eight inches deep, the width of an ordinary shovel and twenty-five feet in length. When the trench was dug about four inches of loose earth were scattered over the bottom. On top of this the pieces of seed were planted six inches apart, and on top of the seed potatoes the mellow earth was shoveled. The growing potatoes were given no hilling during the season. At harvest time this twenty-five foot row yielded three and a half bushels of tubers. An acre at the same rate would yield 837 bushels. So good were the results that this gardener will try a larger tract of ground in the same way next spring.

STORING CELERY.

Sweet and crisp celery may be kept on tap for several months by removing the plants from the ground with a good supply of earth on the roots and setting them in a box in the cellar containing four or five inches of mellow earth. Care should be taken to moisten the roots after the plants are set, and this may be done by pressing the tops to one side at the edge, tilting the box, inserting a piece of tin or paper and pouring the water between this and the side of the box so it will reach the soil at the bottom. If the tops are wet in the watering process they are likely to decay prematurely.

J. C. Trigg

Farm and Garden

KEEPING POTATOES.

Points to Be Considered In the Storing of the Tubers.

The potatoes shown in the illustration are excellent Peachblows grown in the Carbondale district of Colorado under irrigation, says the American Agriculturist. The uniformity and smoothness of the samples show that great care has been used for a number of years in the selection of seed. The eyes are shallow, the shape and size exceedingly uniform. The average yield of these potatoes in 1910 was about 400 bushels per acre. This particular sample analyzed 20 per cent starch.

The important points to be considered in potato storing are as follows: First, the temperature should be kept as low as possible without freezing; second, the air should be kept as dry as possible; third, the potatoes should be kept dark.

A good cellar is 50 by 200 feet. At each end there is a dead air space ten feet square in the form of a vestibule

COLORADO PEACHBLOWS.
[From the American Agriculturist.]

between the outer and inner doors, which affords protection from freezing. There is a driveway clear through, with bins on either side, skylights and ventilators being placed every ten feet. The temperature of the cellar may be lowered by opening the doors and letting a current of air pass through. When it is too cold for this the ventilators at the top may be opened. The best ventilation is always secured by building the cellar in line with the direction of the prevailing air currents. During the winter the temperature should be kept as near 32 as possible. It is best when it does not go below 30 nor above 36. A temperature of 28 for one or two hours will not freeze potatoes.

In planning the size of the structure it is safe to estimate one bushel at one and one-quarter cubic feet. In a small cellar built with a driveway this space need not be wasted, but stored with potatoes or other vegetables after the bins at the side have been filled. One important point in the storage of potatoes is to reduce the temperature to as low a point as possible directly after the product is stored. Put about one foot of potatoes on the cellar floor, and by the time the entire floor is covered to that depth the heat from those potatoes is pretty well carried off by the air currents. Then add another layer, thus properly regulating the temperature as the storage progresses. When the cellar is filled the potatoes are piled about five feet deep.

Sorting potatoes that have started to rot from freezing or disease requires a cellar that can be lighted when desired. Ventilation devices, such as open partitions, may be used to advantage when large quantities of potatoes are stored in bulk. Sacked potatoes, corded in piles, keep well in a good cellar. When sprouts start in the spring the growth of these may be checked by moving the sacks. A bruised sprout dies. When the floor is of dirt it is well to use some sort of material, preferably strips of wood, between the dirt and the potatoes to prevent rot. It is important that potatoes be free from dirt when taken from the field to the cellar. Dirty potatoes do not keep well because of the dirt that falls off and fills up the air spaces between the potatoes, thus preventing free ventilation. A very satisfactory place to build a cellar is on a knoll, thus insuring perfect water draining and a good circulation.

Recipe For Killing Weevils.

Weevils in chestnuts, beans, peas, etc., may easily be killed thus: Put the chestnuts or beans into a tight box, pail or barrel large enough to hold the amount to be treated, pour some bisulphide of carbon in a saucer and set on top of the infested nuts or beans. Then cover the receptacle as tightly as possible and leave it so for twenty-four hours. Caution: Be careful. Have no lights or fire near.—Farm Journal.

"They say his wife makes $5,000 a year with her pen." "I didn't know she was a writer." "She isn't. She has a pig farm in Iowa."—Chicago Record-Herald.